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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,162	01/02/2002	Doron Orenstien	42390P10918	7820

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EXAMINER

LAU, TUNG S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/038,162	ORENSTIEN ET AL.	
	Examiner	Art Unit	
	Tung S Lau	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 8, 15, 19, 2, 3, 5, 6, 7, 9, 10, 12, 13, 14, 16, 18, 20, 21, 23, 24, 25, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Tani (U.S. Patent Application 2002/0073348).

Regarding claim 1:

Tani discloses a microprocessor comprising at least one throttling mechanism (abstract); and a thermal control subsystem to estimate an amount of power used by said microprocessor and to control said at least one throttling mechanism based on said estimated power usage (page 1, section 0007-0009), the use of counter in the thermo control system (page 1, section 0007-0009).

Regarding claim 8:

Tani discloses a method comprising estimating an amount of power used by a microprocessor the use of counter in the thermo control system (page 1, section

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0007-0009), and controlling at least one throttling mechanism incorporated in the microprocessor based on said estimated power usage (page 1, section 0007-0009), the use of counter in the thermo control system (page 1, section 0007-0009).

Regarding claim 15:

Tani discloses a thermal control system comprising a power usage estimator to estimate an amount of power used by a microprocessor based on the number of occurrences of at least one activity performed by the microprocessor during a defined time period the use of counter in the thermo control system (abstract, page 1, section 0007-0009); and a throttling control unit to control at least one throttling mechanism incorporated in the microprocessor based on the estimated amount of power used by the microprocessor (page 1, section 0007-0009), the use of counter in the thermo control system (page 1, section 0007-0009).

Regarding claim 19:

Tani discloses a machine-readable medium that provides instructions, which when executed by a microprocessor cause said microprocessor to perform operations comprising estimating an amount of power used by a microprocessor (page 1, section 0007); and controlling at least one throttling mechanism incorporated in the microprocessor based on said estimated power usage (page

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1, section 0009), the use of counter in the thermo control system (page 1, section 0007-0009).

Regarding claims 2, 3, 5, 6, 7, 9, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 23, 24, 25, 26 and 27:

Tani discloses a method, a thermal control system, a machine-readable medium, microprocessor system including based on number of occurrences of the activity performed in the microprocessor (page 1, section 0009) the microprocessor wherein thermal control subsystem includes a power usage monitoring unit which determines the number of occurrences of at least one activity performed by the microprocessor (abstract) within a sampling time period and computes the estimated power usage based on (1) the count value associated with said at least one activity (page 2, section 0032), (2) current clock frequency and (3) operating voltage level of the microprocessor (page 2, section 0032); compare to a threshold level to activate control power (page 1, section 0005-0008, fig. 2), the throttling mechanism is activated in a deterministic manner by the thermo control system (page 1, section 0009), using cache memory access and instruction decoding (fig. 1, unit 11, fig. 8, unit 116, fig. 11, unit 210), the counter can be implemented hardware or software (fig. 1, unit 11, 21, 45, fig. 5, fig. 6, 7, unit 11).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 4, 11, 17 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Tani (U.S. Patent Application 2002/0073348) and in view of Kenny et al. (U.S. Patent 5,287,292).

Tani disclose a method including the subject matter discussed above except the use of averaging the power estimated power usage, the power value obtained during previous sampling time period. Kenny discloses the use of averaging the power estimated power usage, the power value obtained during previous sampling time period (col. 3, lines 5-13), in order to have an accurate assessment of the circuits total current flow (co. 3, lines 5-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tani to have the use of averaging the power estimated power usage, the power value obtained during previous sampling time period taught by Kenny in order to have an accurate assessment of the circuits total current flow (co. 3, lines 5-13).

***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 8, 15, and 19 have been considered but are moot in view of the new ground(s) of rejection. However, applicant's arguments filed 5-19-2003 have been fully considered but they are not persuasive.

A. Applicant argues that the prior art does not show the use of a counter. Tani disclose the use of counter in the thermo control system (page 1, section 0006-0009, abstract), in order to reduce programming load of the system (page 1, section 0006).

**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 703-305-3309. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

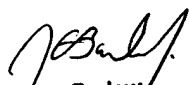
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TC2800 RightFAX Telephone Numbers : TC2800 Official Before-Final RightFAX - (703) 872-9318, TC2800 Official After-Final RightFAX - (703) 872-9319

TC2800 Customer Service RightFAX - (703) 872-9317

TL

May 23, 2003

  
John Barlow  
Supervisory Patent Examiner  
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